

REPLACEMENT ABSTRACT

An apparatus and method for estimating a frequency and/or a phase of a digital input signal by determining phase values of the input signal. The phase values are then added over a predetermined summation length N/B . The sampling rate of the added-up phase values are reduced by a factor N/B in comparison with the sampling rate of the phase values. The added-up phase values are delayed in a chain of at least $B-1$ delay elements. The differently-delayed added-up phase values are then added or subtracted to create a resulting pulse response of the frequency such that the resulting pulse response of the frequency is constant positive in a first interval, is zero in a second interval and is constant negative in a third interval, so that a resulting pulse response of the phase is constant in at least a middle interval or is otherwise zero.